

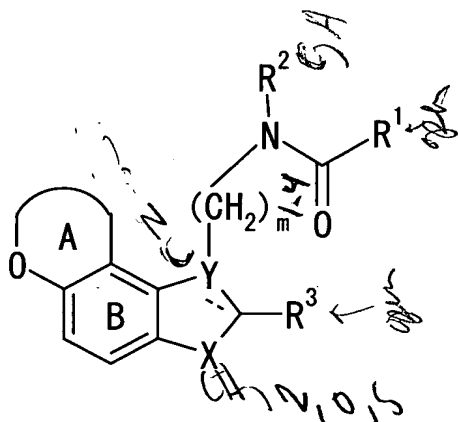
## CLAIMS

1. A percutaneous absorption preparation containing a compound having a melatonin receptor agonist activity, and one or more members selected from fatty acid esters, polyhydric alcohols and nonionic surfactants.

2. The percutaneous absorption preparation according to claim 1 containing a compound having a melatonin receptor agonist activity, and a fatty acid ester, a polyhydric alcohol and a nonionic surfactant.

3. The percutaneous absorption preparation according to claim 2, wherein the compound having a melatonin receptor agonist activity is a compound having a melatonin  $ML_1$  receptor agonist activity.

4. The percutaneous absorption preparation according to claim 1, wherein the compound having a melatonin receptor agonist activity is a compound represented by the formula:



wherein,  $R^1$  represents an optionally substituted

hydrocarbon group, an optionally substituted amino group or

an optionally substituted heterocyclic group;

$R^2$  represents a hydrogen atom or an optionally substituted hydrocarbon group;

$R^3$  represents a hydrogen atom, an optionally substituted hydrocarbon group or an optionally substituted heterocyclic group;

X represents  $CHR^4$ ,  $NR^4$ , O or S in which  $R^4$  represents a hydrogen atom or an optionally substituted hydrocarbon group;

Y represents C, CH or N, provided that when X is  $CH_2$ , Y is C or CH;

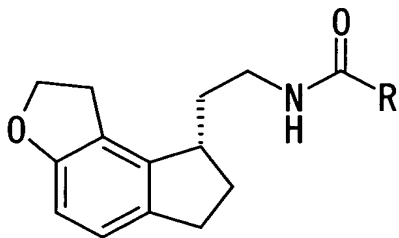
— represents a single bond or a double bond;

ring A represents an optionally substituted, 5- to 7-membered oxygen-containing heterocyclic ring;

ring B represents an optionally substituted benzene ring; and

m represents an integer of 1 to 4;  
or a salt thereof.

5. The percutaneous absorption preparation according to claim 1, wherein the compound having a melatonin receptor agonist activity is a compound represented by the formula:



wherein, R represents a C<sub>1-6</sub> alkyl group.

6. The percutaneous absorption preparation according to claim 1, wherein the compound having a melatonin receptor agonist activity is (S)-N-[2-(1,6,7,8-tetrahydro-2H-indeno[5,4-b]furan-8-yl)ethyl]propionamide.

7. The percutaneous absorption preparation according to claim 1, wherein the compound having a melatonin receptor agonist activity is (S)-N-[2-(1,6,7,8-tetrahydro-2H-indeno[5,4-b]furan-8-yl)ethyl]acetamide.

8. The percutaneous absorption preparation according to claim 1, wherein the fatty acid ester is an ester of a carboxylic acid having 6 to 22 carbon atoms and an alkyl alcohol having 1 to 12 carbon atoms.

9. The percutaneous absorption preparation according to claim 1, wherein the fatty acid ester is isopropyl myristate, isopropyl palmitate, butyl myristate, or diethyl sebacate.

10. The percutaneous absorption preparation according to claim 1, wherein the fatty acid ester is isopropyl myristate.

11. The percutaneous absorption preparation according

to claim 1, wherein the polyhydric alcohol is ethylene glycol, propylene glycol, 1,3-butylene glycol, glycerin or polyethylene glycol.

12. The percutaneous absorption preparation according  
5 to claim 1, wherein the polyhydric alcohol is propyleneglycol.

13. The percutaneous absorption preparation according to claim 1, wherein the polyhydric alcohol is polyethylene glycol.

10 14. The percutaneous absorption preparation according to claim 1, wherein the polyhydric alcohol is polyethylene glycol having a molecular weight of about 200 to about 1000.

15 15. The percutaneous absorption preparation according to claim 1, wherein the nonionic surfactant is a fatty acid amide, a polyhydric alcohol fatty acid ester or a polyglycerol fatty acid ester.

16. The percutaneous absorption preparation according to claim 1, wherein the nonionic surfactant is a fatty acid amide.

20 17. The percutaneous absorption preparation according to claim 16, wherein the fatty acid amide is lauric diethanolamide or a compound including the same.

25 18. The percutaneous absorption preparation according to claim 16, wherein the fatty acid amide is coconut fatty acid diethanol amide.

19. The percutaneous absorption preparation according to claim 1 containing (S)-N-[2-(1,6,7,8-tetrahydro-2H-indeno[5,4-b]furan-8-yl)ethyl]propionamide, isopropyl myristate, polyethyleneglycol and lauric diethanolamide.

5        20. The percutaneous absorption preparation according to claim 1 containing (S)-N-[2-(1,6,7,8-tetrahydro-2H-indeno[5,4-b]furan-8-yl)ethyl]acetamide, isopropyl myristate, polyethyleneglycol and lauric diethanolamide.

10       21. The percutaneous absorption preparation according to claim 1 which is a skin plaster.

15       22. The percutaneous absorption preparation according to claim 1 containing in a skin contact member, a compound having a melatonin receptor agonist activity and one or more members selected from fatty acid esters, polyhydric alcohols and nonionic surfactants.

23. The percutaneous absorption preparation according to claim 22 containing in a skin contact member, a compound having a melatonin receptor agonist activity, and a fatty acid ester, a polyhydric alcohol and a nonionic surfactant.

20       24. The percutaneous absorption preparation according to claim 22 containing in a skin contact member, an about 1 to about 30% by weight of fatty acid ester with respect to a weight of the skin contact member.

25       25. The percutaneous absorption preparation according to claim 22 containing in a skin contact member, an about 1

to about 30% by weight of polyhydric alcohol with respect to a weight of the skin contact member.

26. The percutaneous absorption preparation according to claim 22 containing in a skin contact member, an about 1  
5 to about 15% by weight of nonionic surfactant with respect to a weight of the skin contact member.

27. The percutaneous absorption preparation according to claim 22 containing in a skin contact member, an adhesive agent.

10 28. The percutaneous absorption preparation according to claim 22, wherein the adhesive agent is an acrylic adhesive agent.

29. The percutaneous absorption preparation according to claim 22 containing in a skin contact member, an about  
15 0.01 to about 70% by weight of compound having a melatonin receptor agonist activity with respect to a weight of the skin contact member.

30. The percutaneous absorption preparation according to claim 22 containing in a skin contact member, an about 5  
20 to about 99% by weight of adhesive agent with respect to a weight of the skin contact member.

31. The percutaneous absorption preparation according to claim 22, wherein a content of the compound having a melatonin receptor agonist activity per unit skin contact  
25 surface of a skin contact member is about 0.01 to about

100 mg/cm<sup>2</sup>.

32. The percutaneous absorption preparation according to claim 22 containing in a skin contact member, a filler.

33. The percutaneous absorption preparation according to claim 32, wherein the filler is silicon dioxide.

34. The percutaneous absorption preparation according to claim 1 which is to be affixed between about 6 hours before bedtime to just before bedtime.

35. The percutaneous absorption preparation according to claim 1 which maintains an effective concentration of the compound having a melatonin receptor agonist activity in blood for about 6 hours to about 12 hours.

36. The percutaneous absorption preparation according to claim 1 which maintains an effective concentration of the compound having a melatonin receptor agonist activity in blood until about 1 to about 2 hours before waking up.

37. The percutaneous absorption preparation according to claim 1, wherein an effective blood concentration of the compound having a melatonin receptor agonist activity exhibits a one peak pattern within 12 hours after administration.

38. The percutaneous absorption preparation according to claim 37, wherein a peak of the effective blood concentration of the compound having a melatonin receptor agonist activity appears within about 10 hours after

administration.

39. A preventive and therapeutic method of diseases related to melatonin, characterized by administering a percutaneous absorption preparation which contains a  
5 compound having a melatonin receptor agonist activity, and one or more members selected from fatty acid esters, polyhydric alcohols and nonionic surfactants.

40. A percutaneous absorption method of a compound having a melatonin receptor agonist activity, wherein the  
10 percutaneous absorption preparation contains a compound having a melatonin receptor agonist activity and one or more members selected from fatty acid esters, polyhydric alcohols and nonionic surfactants.

41. A use of one or more members selected from fatty  
15 acid esters, polyhydric alcohols and nonionic surfactants for achieving percutaneous absorption of a compound having a melatonin receptor agonist activity.

